

Notice of Allowability

Application No.

10/749,904

Examiner

TUAN A. PHAM

Applicant(s)

LI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed on 12/29/2003.
2. ☒ The allowed claim(s) is/are 1-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Attorney of record Ann McCrackin on 12/01/2006.

3. The application has been amended as follows:

In the claims:

In claim 5, line 1, before "comprising", insert – of calibrating a wireless access point --.

In claim 8, line 1, before "comprising", insert – of calibrating a wireless access point --.

In claim 8, line 11, before "approximately", insert – gain ratio --.

In claim 8, line 11, after "second output data", insert – gain ratio --.

In claim 12, line 1, before "comprising", insert – of calibrating a wireless access point --.

In claim 15, line 1, before "comprising", insert – of calibrating a wireless access point --.

(End of Amendment)

REASONS FOR ALLOWANCE

4. Claims 1-33 are allowed over the prior art of record.
5. The following is an examiner's statement of reasons for allowance:

Ketchum et al. (U.S. Pub. No.: 2005/0135403, hereinafter, "Ketchum") teaches a method of calibration of transmit and receive chains at the access point and adjust a gain in the transmission and reception.

Chesson (U.S. Patent No.: 6,795,407) teaches a method of calibration of receive side at the access point and adjust a gain in the receiver.

Walton et al. (U.S. Pub. No.: 2004/0146016) teaches a multi mode terminal in a wireless MIMO system. Calibration of the downlink and uplink of transmit and receive chains of the access point and adjust a gain in the transmission and reception.

Wallace et al. (U.S. Pub. No.: 2005/0128953) teaches a channel calibration of a downlink and the uplink of transmit and receive chains.

However, the prior art made of record, alone or in combination, fails to clearly teach or fairly suggest a method and an apparatus of calibrating a wireless access point, which includes first and second antennas subsystem, first and second transmit and receive chains wherein calibrating includes adjusting a gain of at least one of the first antenna subsystem and the second antenna subsystem so that a first gain ratio between the first transmit chain and the first receive chain approximately equals a second gain ratio between the second transmit chain and the second receive chain, in combination with other limitations, as specified in the independent claims 1, 5, 8, 12, 15,

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20, 24, 27, and 31, and further limitations of their respective dependent claims 2-4, 6-7, 9-11, 13-14, 16-19, 21-23, 25-26, 28-30, and 32-33.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Pham whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

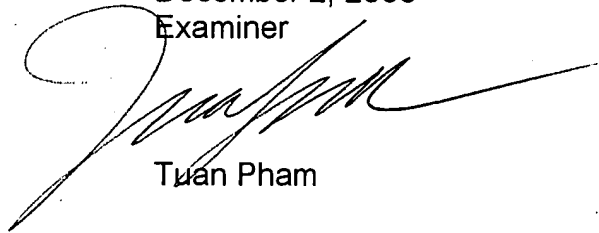
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you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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December 2, 2006
Examiner

A handwritten signature in black ink, appearing to read 'Tuan Pham', with a long horizontal stroke extending to the right.

Tuan Pham

Supervisory Patent Examiner
Technology Center 2600

A handwritten signature in black ink, appearing to read 'Matthew Anderson', with a long horizontal stroke extending to the right.

Matthew Anderson